

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO. LTD. and SAMSUNG ELECTRONICS
AMERICA, INC.,

Petitioners

v.

MOBILE DATA TECHNOLOGIES LLC,

Patent Owner

IPR2025-00544
U.S. Patent No. 9,619,578

**DECLARATION OF MAHDI ESLAMIMEHR, PH.D. IN SUPPORT OF
PATENT OWNER'S PRELIMINARY RESPONSE**

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I, Mahdi Eslamimehr, declare as follows:

I. INTRODUCTION

1. I have been retained by Mobile Data Technologies LLC (“MDT”) as an independent expert consultant in petition for the *Inter Partes* Review (“IPR” or “Petition”) involving U.S. Patent No. 9,619,578 (“the ‘578 Patent”) presently assigned to MDT. I have been asked to consider the arguments raised by the Petition regarding the validity of the ‘578 Patent. In particular, I have been retained as an expert in computer science to provide analysis and opinions related to whether certain claims of the ‘578 Patent are rendered obvious by prior art asserted by Petitioners (Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc.). I understand that Petitioners have asserted that claims 1, 6-12, 15-19, and 21-22 (the “Challenged Claims”) are rendered obvious under 35 U.S.C. §103 by the combination of Randall-Forsyth (Ground 1) and of Pelkey-Eck (Ground 2).

2. I submit this Declaration as a statement of the opinions I have formed and the factual basis for the opinions. I understand that this Declaration is submitted in regard to IPR2025-00544. I am prepared to testify as to the matters discussed herein.

3. I am over 18 years of age. I have personal knowledge of the facts stated in this Declaration and could testify competently to them if asked to do so.

4. My current employer, Quandary Peak Research, is paid a consulting fee for my time working on this matter.

5. I have no personal interest in this matter, and my compensation does not depend in any way on the opinions I express or the outcome.

II. QUALIFICATIONS

6. I, Mahdi Eslamimehr, hold a Ph.D. in Computer Science from the University of California, Los Angeles (UCLA), complemented by an M.S. in Computer Science from Linköping University, Sweden, and an MBA from the London School of Economics and Political Science. Currently, I serve as Executive Vice President at Quandary Peak Research, overseeing Intellectual Property (IP) evaluations and Mergers & Acquisitions (M&A) transactions. Additionally, I am a Professor at the University of Southern California, Department of Computer Science, where I exclusively teach advanced-level courses to Master's and Ph.D. students, specifically Advanced Software Engineering and Software Economics.

7. My professional expertise closely aligns with the technological domains central to regarding mobile computing, wireless communications, network integration, and complex software architectures. My executive role at Quandary Peak involves in-depth evaluation and strategic consulting on complex IP and M&A matters, frequently involving software patents related to mobile technologies,

network functionalities, and integrated application channels similar to those described in the patent at issue.

8. In my academic role at the University of Southern California, I teach and mentor graduate students on advanced software engineering principles, including the design, implementation, and evaluation of complex software systems and their economic impacts. My research and teaching focus extensively on software system integration, concurrency, software reliability, and performance analysis, key technical areas directly applicable to the integration of mobile device functionalities with networked application-based information channels highlighted in the multi-domain solution technologies.

9. My industry experience, notably as Chief Technology and Operating Officer at Clarity Global and through senior research roles at Samsung Electronics R&D Center and Ericsson AB, provided direct involvement in developing and managing software solutions for resource-constrained, network-centric mobile environments. These roles required extensive knowledge of telecommunications protocols, mobile device integration, and distributed software architectures, closely paralleling the technical focus of the patent. For example, while a software engineer at Ericsson from 2006 to 2007, I contributed to analyzing several features related to Symbian OS (different versions) and Symbian-based mobile phones (a wide range of handheld devices). My work involved close collaboration with mobile platforms,

integrating Symbian functionalities, and enhancing the software experience for end users.

10. Furthermore, my scholarly contributions, including numerous peer-reviewed publications and conference presentations, emphasize advanced software testing, reliability engineering, concurrency analysis, and software economic valuation, thereby underscoring my deep theoretical and practical expertise relevant to assessing complex technological innovations.

III. SUMMARY OF OPINIONS

11. It is my opinion that the challenged claims are patentable and that the Petition in this proceeding has not established otherwise. The combinations of references proposed in the Petition do not disclose each limitation of the Challenged Claims, and a person of ordinary skill in the art at the time of the invention (the “skilled artisan”) would not have combined the references in the manner suggested in the Petition.

12. On the contrary, a skilled artisan would not have been motivated to combine the references. Furthermore, even assuming a skilled artisan had been motivated to combine the references in the manner suggested in the Petition, the resulting combination would not have met the claim language. This is true for each of Ground 1 and Ground 2.

13. Petitioners have created combinations that are the result of hindsight, the result of using the challenged patents as a roadmap to select various portions of prior art references and attempting to combine them without a sufficient reason outside the challenged patents for doing so.

14. Regardless, Petitioners' art admittedly fails to disclose various limitations. And Petitioners' attempts to gap-fill these missing disclosures with other art similarly fail as they are both improper and likewise do not disclose what Petitioners claim they do.

15. In forming my opinions in this Declaration, I have considered:

- a. U.S. Patent No. 9,619,578 and its file / prosecution history before the U.S. Patent and Trademark Office;
- b. Petitioners' Petition for Inter Partes Review and attached exhibits;
- c. the Declaration of Henry Houh, Ph.D. submitted as EX-1003 in the Petition proceeding;
- d. references cited therein in support of the Petition;
- e. Petitioners' Response to Patent Owner's Discretionary Denial Brief in IPR2025-00536; and
- f. my education, training, and experience in the field.

IV. LEGAL PRINCIPLES

A. Claim Construction

16. I understand that the claims of a patent are read in light of the specification of the patent as understood by a person of ordinary skill in the art at the

time of the invention (a “skilled artisan”). I understand that “the time of the invention” refers to the effective filing date of the patent in question. For purposes of my analysis, I am considering the effective filing date to be June 18, 2002, the filing date of the original provisional application 60/389,430 to which the ‘578 Patent claims priority, but my opinions in this Declaration would not change if any claim of the ‘578 Patent is not entitled to claim priority to the provisional application. I reserve the right to opine further on the question of priority if it later becomes relevant.

17. I understand that claim terms are given their ordinary and customary meaning as would be understood by a skilled artisan in the context of the entire disclosure. A claim term, however, will not receive its ordinary meaning if the patentee acted as its own lexicographer and clearly set forth a definition of the claim term in the specification. In this case, a claim term will receive the definition set forth in the patent.

18. I understand that evidence that is intrinsic to the patent and prosecution history is given more weight than extrinsic evidence. For example, if there are specific statements in the specification that define the invention, those statements are strong evidence of a definition for a term.

19. In this Declaration, unless otherwise stated, I have used what I believe to be the ordinary and customary meanings for the terms used in the claims in the context of the challenged patent.

B. My Understanding of Obviousness

20. I understand that a patent claim is invalid if the claims would have been obvious to a skilled artisan at the time of invention (which, as stated above, I am presently treating as June 18, 2002, since I understand that date is currently not in dispute). I understand that the obviousness inquiry should not be done with hindsight, but from the perspective of a skilled artisan without knowledge of the teachings of the challenged patent.

21. I understand that a claim is obvious when the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious to a skilled artisan at the time the invention was made. That is, I understand that one does not evaluate the “obviousness” of individual claim elements, but rather must compare the claimed subject matter as a whole to the prior art.

22. I understand that obviousness can be established by combining multiple prior art references to meet each and every claim element, but I also understand that when making a proposed combination of references, care must be taken to avoid hindsight bias. That is, I am informed by counsel that the determination of

obviousness cannot be based on the hindsight combination of components selectively culled from the prior art to fit the parameters of the patented invention, effectively using the claims as a roadmap.

23. I understand that, to support a conclusion of obviousness, there must be an apparent reason for a skilled artisan to combine or modify the prior art references as recited in the claims.

24. As part of this inquiry, I have been asked to consider the level of ordinary skill in the field that someone would have had at the time the claimed invention was made. In determining the level of ordinary skill, I considered the following: (1) the levels of education and experience of persons working in the field; (2) the types of problems encountered in the field; and (3) the sophistication of the technology.

C. Relevant Level of Ordinary Skill in the Art

25. I have been asked to consider the level of ordinary skill in the art that a skilled artisan would have had as of June 2002. It is my opinion that a person of ordinary skill in the art (whom I refer to as a “POSITA”) would have been a person with a bachelor’s degree in information systems, electrical engineering, computer engineering, or computer science, as well as two or more years of relevant industry experience, which would include experience in handheld wireless devices and web site design. More academic experience would compensate for less industry

experience and more industry experience would compensate for less academic experience.

26. In 2002 timeframe, my work included work with mobile devices and the Symbian operating system. Furthermore, based on my review of the materials in this matter, as well as from my post-graduate educational background and years of professional experience, I am familiar with the level of ordinary skill in the art as of 2002.

V. THE CHALLENGED PATENT

A. Specification

27. The '578 Patent describes a method that enables a mobile device user to transfer content from the mobile device into an application-based information channel so that the mobile device user can interact with one or more additional users.

The '578 Patent describes in col. 10, lines 38-57:

The content management site in the illustrative embodiment is designed to generate and otherwise manage dynamic, time-sensitive, task-oriented mobile sites, including wireless collaborative workspaces and communities. The content management site allows content such as data, media, multimedia, messages, news, features, events, polls, competitions and advertising to be rapidly created, entered into the system, and then subsequently syndicated, distributed, shared, collaborated with or acted upon by users of mobile devices.

By utilizing the content management site, system users can create one or more personal or business mobile sites with various sets of features, and then share such sites

via the mobile Internet or other wireless network with friends, family, colleagues, or other groups of any type. The content management site makes it simple for unsophisticated users to upload, enter, create, syndicate, distribute or otherwise manage content that is important to them, in a manner that allows such content to be accessed, shared, and acted upon from a mobile device.

28. The invention also integrates information associated with at least one wireless networking functionality of the mobile device from the mobile device to generate an integrated content item. The '578 Patent indicates in col. 6, lines 12-19:

Examples of such information include information specifying at least one messaging action implementable over the wireless network, information specifying at least one collaboration action implementable over the wireless network, and information specifying at least one location-based service action implementable over the wireless network. Other types of information associated with wireless networking functionalities may also or alternatively be used.

29. The content and the information associated with the at least one wireless networking functionality of the mobile device is inserted into the application-based information channel. This element is described in col. 6, lines 12-19 and col. 10, lines 38-57 of the '578 Patent, which are set forth above.

30. The invention also enables other content from at least one of the additional users to be inserted into the previously established application-based information channel. For example, the '578 Patent indicates in col. 18, line 65-col. 19, line 4:

Furthermore, the invention allows users to more efficiently communicate, collaborate and otherwise interact with their friends or colleagues instantly and seamlessly within a single system that provides a mobile web site integrating existing wireless networking functionalities, such as IM, SMS, MMS, location-based services, or email, with personally authored content.

B. Representative Claims

31. The Challenged Claims include independent claims 1, 8, 9, 12, 16, 17, 21, and 22. Claims 8 and 16 are “computer readable medium” claims performing the method of claim 1 and claim 12, respectively.

32. Petitioners treat claims 1 and 9 together as reciting substantially overlapping limitations, claims 12 and 17 together, and claims 21 and 22 together. In addressing claims 12, 17, 21, and 22, Petitioners cross-reference arguments for corresponding limitation in claims 1 and 9. Accordingly, for ease of presentation, I generally treat them similarly.

33. Independent Claim 1 of the ’578 patent recites:

1. A method comprising:

providing a first interface permitting designation of at least one content item, via a mobile device, for insertion into an application-based information channel, the at least one content item comprising media data captured by the mobile device; and

integrating the at least one content item and information associated with at least one wireless networking functionality of the mobile device to generate at least one integrated content item; and

inserting the at least one integrated content item into the application-based information channel, the application-based information channel providing a second interface wherein two or more users share access to a plurality of content items including the at least one integrated content item.

34. Independent Claim 8 of the '578 patent recites:

8. A non-transitory computer-readable storage medium having embodied therein executable code of one or more software programs, wherein said executable program code when executed by a processing element implements the steps of the method of claim 1.

35. Independent Claim 9 of the '578 patent recites:

9. An apparatus comprising:

a processing element comprising a processor coupled to a memory;

the processing element providing at least a portion of a first interface permitting designation of at least one content item, via a mobile device, for insertion into an application-based information channel, the at least one content item comprising media data captured by the mobile device; and

the processing element being configured:

to integrate the at least one content item and information associated with at least one wireless networking functionality of the mobile device to generate at least one integrated content item; and

to insert the at least one integrated content item into the application-based information channel, the application-based information channel providing a second interface wherein two or more users share access to a plurality of content items including the at least one integrated content item.

36. Independent Claim 12 of the '578 patent recites:

12. A method comprising:

designating at least one content item, via a mobile device, for insertion into an application-based information channel, the at least one content item comprising media data captured by the mobile device; and

providing information associated with at least one wireless networking functionality of the mobile device for integration with the at least one content item;

wherein the at least one content item and the information associated with said at least one wireless networking functionality of the mobile device are integrated to generate at least one integrated content item; and

wherein the at least one integrated content item is inserted into the application-based information channel, the application based information channel providing an interface wherein two or more users share access to a plurality of content items including the at least one integrated content item.

37. Independent Claim 16 of the '578 patent recites:

16. A non-transitory computer-readable storage medium having embodied therein executable code of one or more software programs, wherein said executable program code when executed by a processing element implements the steps of the method of claim 12.

38. Independent Claim 17 of the '578 patent recites:

17. A mobile device comprising:

a processing element comprising a processor coupled to a memory; and

a network interface;

the processing element being configured to:

designate at least one content item for insertion into an application-based information channel, the at least one content item comprising media data captured by the mobile device; and

provide information associated with at least one wireless networking functionality of the mobile device for integration with the at least one content item;

wherein the at least one content item and the information associated with said at least one wireless networking functionality of the mobile device are integrated to generate at least one integrated content item; and

wherein the at least one integrated content item is inserted into the application-based information channel, the application-based information channel providing an interface wherein two or more users share access to a plurality of content items including the at least one integrated content item.

39. Independent Claim 21 of the '578 patent recites:

21. A method comprising:

providing a first interface on a mobile device permitting a user to designate at least one content item for insertion into an application-based information channel, the at least one content item comprising media data captured by the mobile device;

wherein information associated with at least one wireless networking functionality of the mobile device is integrated with the at least one content item to generate at least one integrated content item; and

wherein the at least one integrated content item is inserted into the application-based information channel, the application-based information channel providing a second interface wherein two or more users share access to a plurality of content items including the at least one integrated content item.

40. Independent Claim 22 of the '578 patent recites:

22. A method comprising:

accessing a first interface using a mobile device;

providing at least one content item to at least one server for insertion into an application-based information channel using the first interface, the at least one content item comprising media data captured by the mobile device; and

providing information associated with at least one wireless networking functionality of the mobile device to said at least one server responsive to user input;

wherein the at least one content item and the information associated with said at least one wireless networking functionality of the mobile device are integrated to generate at least one integrated content item; and

wherein the at least one integrated content item is inserted into the application-based information channel, the application-based information channel providing a second interface wherein two or more users share access to a plurality of content items including the at least one integrated content item.

VI. THE PRIOR ART

A. Randall (EX.1005)

41. International Published Patent Application No. WO02/1762, to Randall et al., for “Database For Use With A Wireless Information Device” (“Randall”), published on February 28, 2002, based on an application filed August 22, 2001. It claims priority to three applications dating back to August 22, 2000. It is assigned to Symbian Limited.

42. Randall is directed to “a database for use with a wireless information device” (Randall, 1:7) and “the use of an open, universal data infrastructure for wireless information devices which can be used by application developers to write new applications by extending the attributes of the database using a standard protocol, as opposed to a closed and proprietary protocol” (Id., 3:10-13). Randall contrasts this to “the need to custom build the data sharing infrastructure for each new application.” Randall, 2: 25-27. In other words, Randall is directed to providing an infrastructure for “new applications requiring access to shared content.” Id., 3:17-19.

43. Randall describes an implementation called the ADS system, described as in information distribution architecture. The core structures of the ADS system include (a) Internet servers hosting extensible databases; (b) wireless information devices which can access information on these databases; and (c) applications

resident on these devices which present a common set of APIs to plug-ins from commercial service providers.” Id., 7:16-19. The extensible database “is at the heart of much of the ADS system’s extensibility.” Id., 66. The data is resident on a server, referred to as the “i-server”. Id. Table 1, for example, “is an example application view of Alice’s [a Hypothetical user] i- data.” Randall, 66:17-67.

44. The new services and functions Randall purports to allow include different types of mobile call features. *See* Randall, 63 (“Section H An illustration: how the ADS system framework is used in making a telephone call”). As identified in Appendix 1, specific features include “Ring Back” (which allows a caller’s phone to ring automatically when both the caller and intended recipient phones are “clear, on and have network coverage”) and “Home Divert” (which allows user to quote divert all calls on [his/her] home phone to [their] mobile, or vice versa”). Randall, 80. Another example in Appendix 1 is “Take a picture,” which describes using “a special type of mobile phone with the photographic lens in it.” Id. Without providing specific implementation details, Randall explains that the user’ phone “takes a digital picture, which you can send to your friends, and “[y]ou can then call them and chat about it.” Id. There is no indication that such sending of a picture is part of a Forum or sent with any other information pertaining to the user or their device.

45. While Randall indicates the devices are able to communicate over different types of networks, such as GSM (id., 11-13), it states that “devices based

on the Symbian platform, are smarter than current generation GSM phones...” (Id., 1:19-21).

B. Forsyth (EX.1006)

46. US Patent No. 7,047,030 to Forsyth, for Group Communication Method For A Wireless Communication Device, issued on May 16 2006 based on an application filed May 2, 2002. It claims priority to an application filed May 2, 2001. The application is assigned to Symbian Limited.

47. In general, Forsyth describes a group communication method that leverages the use of a group object, which can be used across different applications. As described in the summary of the present invention, once end users that form a group are identified, “a group object [is] constructed that defines or references members of the group in a way that enables communication to take place from the device and all members of the group.” 2:6-9. The group object may be used by a first application for defining members of the group, as well as “a second application running on the device, unrelated to the first application,” to enable unrelated communication among the group. 2:10-16.

48. Clearly stated by Forsyth: “Fundamental to forums is the idea of there being an object which defines solely the identities of members of a group: as such, it is content and application independent.” 5: 15-17. This confirms that (i) the group object is the basis for communications in Forums, (ii) the object defines solely the

identities of members of a group; they are content independent, and (iii) group objects are also application independent.

49. Forsyth notes that an implementation of the present invention it's called Forums. As described, “it is designed specifically to allow current and very popular Internet type services (e.g. chat/instant messaging between groups) to be handled effectively between mobile devices and to enable a new generation of group-based communications services.” 2:40-47. Forsyth continues by describing the basis for such effective handling, namely the use of group objects. “The content and application independent group object is therefore a foundation stone for building applications which enable a huge range of new group-based communications/interaction functions.” 3:14-18.

50. Forsyth describes the group object as separate from the content. “In one implementation, the group object is used to define the **addresses** of multiple recipients for a message.” 4:17-19. Moreover, “[t]hat **message** can subsequently be treated as a single ‘communication object’”, namely, a separate object. 4:17-20. There is no disclosure of a single object with addresses, names, and content.

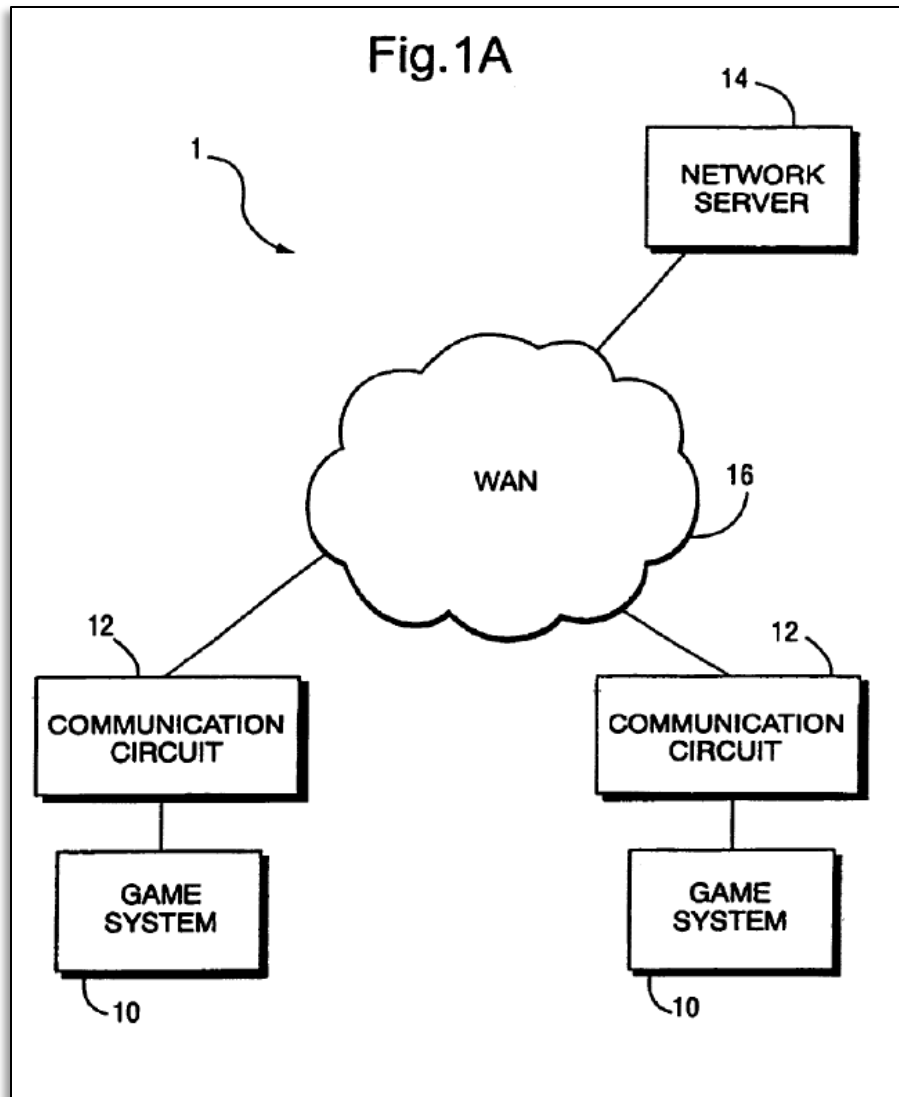
51. Forsyth describes several separate “scenarios.” In my opinion, each of these are text-based examples, although some describe the posting of, e.g., photos or MP3 files. However, when describing the photos and MP3 files, it is clear that they

are not captured by the mobile device and uploaded by the mobile device into a Forum.

C. Pelkey (EX.1007)

52. US Patent No. 7,056,217 to Pelkey, for Messaging Service for Video Game Systems with Buddy List that Displays Game Being Played, issued on June 6, 2006, based on an application filed November 28, 2000. It claims priority to an application filed May 31, 2000. The application is assigned to Nintendo Co.

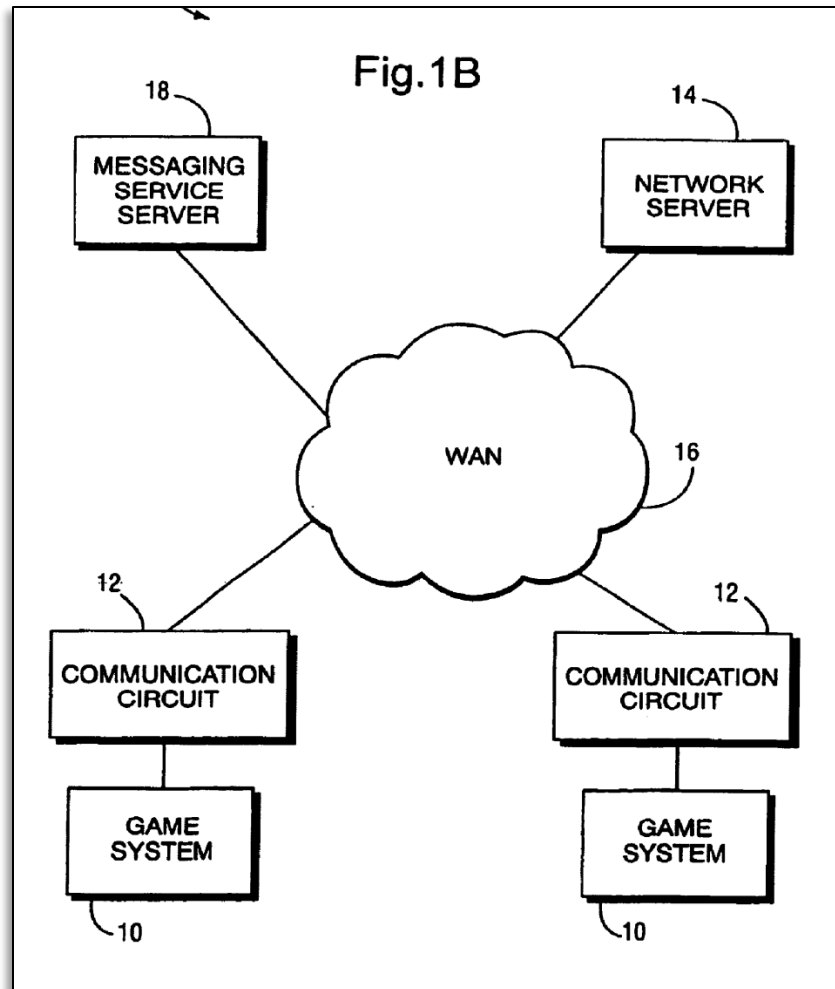
53. In general, Pelkey describes a messaging system that includes at least two video game systems connected to a web server computer (e.g., connected via the Internet) that purportedly communicates messages between users of the video game systems. Abstract, 1:13-16. More specifically, Pelkey describes a basic architecture of the network, in which a messaging service can be implemented, as shown in FIG. 1A:



Pelkey describes a basic implementation in which game systems are connected via communications circuits (e.g., modems, network interfaces, etc.) to a wide area network (e.g., the Internet). A network server is connected to the WAN and able to store games that may be played by users of the network. The messaging service, which can be provided by the network server or may use the network server, is used to communicate messages between users of the video game systems. 2:58 through 3:12.

54. Pelkey describes examples of the game systems that can be used in the messaging system, which include a console system (shown in figure 2) and a portable game system (shown in figures 3A, 3B, and 3C). For each game system (console and portable), a removable video game storage device (i.e., a game cartridge) is used, wherein a given cartridge includes a printed circuit board including a read-only memory (ROM) and potentially read/write memory, wherein the ROM stores instructions and other information pertaining to a particular video game. A user will insert a game cartridge of their choosing into game cartridge slot of the game system, enabling game machine circuitry to access information contained within ROM (and read/write memory), which information controls the game system to play the appropriate video game by displaying images and reproducing sound as specified under control of the ROM game program information. 3:49 through 4:17; 5:22-54.

55. Pelkey describes a classical client-server network architecture where communication is centralized and mediated by servers, not conducted directly between peers. Pelkey's Figure 1B clearly illustrates this model:



showing a central “Messaging Service Server” (18) and “Network Server” (14) at the hub of a Wide Area Network (WAN) (16). The game systems (10) are clients that depend entirely on these servers, which are responsible for critical functions like “set[ting] up text-based chat sessions” and “suppl[y]ing messages received from one logged-in player to another logged-in player.” 17:4-10.

56. Client-server network architecture operates on a subscription-based communication model, where access is controlled and not open. A user must first be a “registered user of the messaging service” before being granted access. The system

uses a “buddy list” stored on the network server, which functions as a subscription mechanism where users “subscribe” to status updates from other players. This publish-subscribe pattern is confirmed in the patent’s abstract, which notes that the “web server computer generates a session file indicative of user status and the status of each...persons on a buddy list of the user.” This client-server and subscription-based architecture is explicitly designed to operate over the disclosed internet-based infrastructure, which connects the game systems to the servers via a WAN like the Internet. The infrastructure's purpose is solely to allow clients to reach the central servers which then manage all communications according to the network architectural rules. Thus, Pelkey describes a classic, centralized, client-server system reliant on an internet-based infrastructure to connect clients to its core servers for subscription-based communication.

57. Pelkey further notes that the game cartridge includes program code for a messaging service client. 6:42-46. Pelkey notes that access to the game network (and thus access to the messaging service) is initiated when the user uses a cartridge having program code that includes code for the messenger service client. 9:55-56.

58. Pelkey describes various features of the messaging service (each of which is stored in the network server), including user registration (i.e., initial creation of user account and/or subsequent input of account username for logging in to account), creation of a user profile or updating user profile (i.e., user profile

contains user-specific information, such as name, location, and other attributes or preferences, as well as profile image depicting their appearance or preferred appearance), and creation of a “buddy list” (i.e., a user-created list of other users (“buddies”) that he/she wishes to remain in contact. 6:48 through 7:59.

59. Pelkey notes that the message service allows for a connected user and his/her buddies to communicate with each other on an individual basis and/or via private chat sessions that can be set up. Pelkey describes such communications as typically text-based, but also possible to set up voice over Internet sessions between users. 7:51-56.

60. As such, it is clear that the messaging service of Pelkey is limited to the exchange of text-based messages and, possibly, in some instances, voice-based communication.

61. This is further evidenced by the fact that Pelkey points to the specific input device(s) of a given game system that is usable by a user to create such text-based messages and/or voice communication. For example, “In the case of a game console, an on-screen keyboard may be used, and the game controls are usable to select characters from the on-screen keyboard to create messages. In another implementation, a separate keyboard (not shown) may be connected to the game console. In still another implementation, the input device may be a microphone to enable voice over IP communications. Voice over IP may be implemented within

the messaging service.” 10:65 through 11:7. “In the case of a portable game system, an on-screen keyboard may be used to create messages. If voice input is supported, a microphone may also be used.” 11:8-10.

62. As admitted by Petitioners and their expert, Houh:

(i) Pelkey does not describe integration of messaging and sharing content like photos with multiple users (Ex.1003, ¶247);

(ii) Pelkey does not describe any in-game messaging (Ex.1003, ¶247; Petition, 60-61); and

(iii) Pelkey does not disclose details of the wireless network used to provide wireless messaging from the game system to the server (Petition, 76-77; Ex.1003, ¶276).

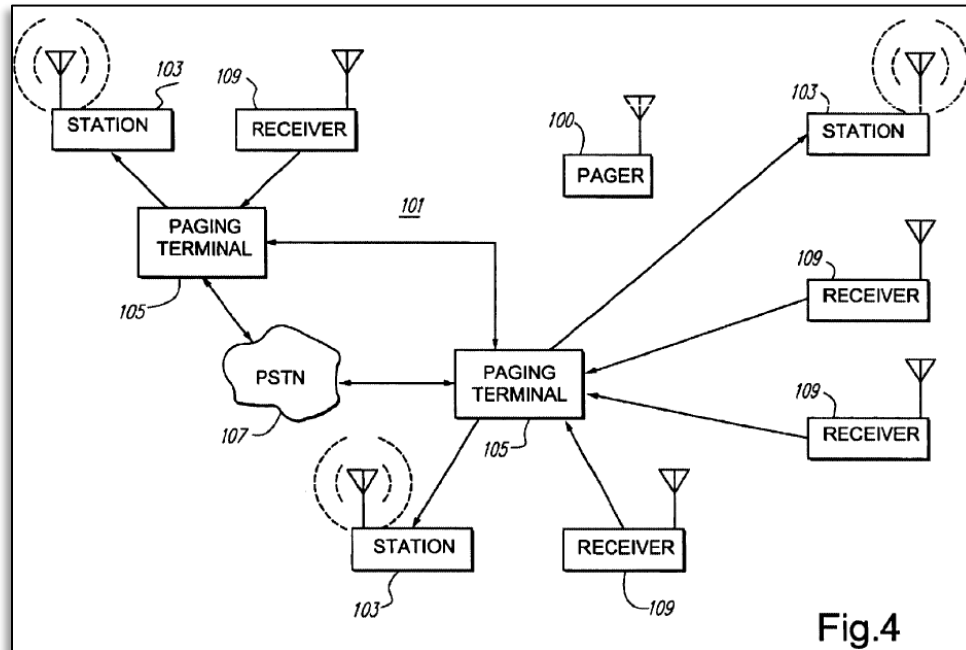
D. Eck (EX.1008)

63. US Patent No. 6,716,103 to Eck, for Portable Game Machine, issued on April 6, 2004, based on an application filed September 11, 2000. It claims priority to an application filed October 7, 1999. The application is assigned to Nintendo Co.

64. Eck generally describes a pager cartridge for use with a portable game machine, in which the pager cartridge houses elements of a two-way pager. 5:8-10. Eck purports that the pager cartridge may be configured to transfer messages received over paging system to portable game machine when coupled to the portable game machine, wherein such messages may be visually and/or aurally

communicated to a user of the portable gaming machine. 6:13-24.

65. Eck provides an architecture of a paging system, over which the pager cartridge is configured to communicate and transmit messages, as shown in FIG. 4:



Eck specifically states (5:45 through 6:7):

FIG. 4...discloses a two-way paging system 101 that includes paging stations 103, paging terminals 105, public switched telephone network (PSTN) 107, paging receivers 109 and a pager 111. While only two paging terminals 105 are shown, a paging system may include many paging terminals. Likewise, the number of other components of paging system 101 is merely illustrative.

Paging stations 103 are also referred to as base stations or paging transmitters. In operation, callers who wish to page a system user use PSTN 107 to call the system user's pager telephone number. In a system including pager-equipped portable game machines, a computer of the game content provider may be connected to PSTN 107. Alternatively, pages can be originated

through a computer network directly connected to a paging terminal. The call is routed, perhaps through a plurality of paging terminals from PSTN 107 to paging terminal 105 that formulates a page. The page is distributed over a communications network to each of paging stations 103. Paging stations 103 in turn transmit the page throughout the geographic coverage area of paging system 101. For example, the page may be broadcast over radio waves on a dedicated frequency. The paging system may operate using any well-known protocol such as Flex, ReFlex (e.g., ReFlex 25) or POCSAG.

If pager cartridge 100 is within the geographic coverage area of paging system 101, pager cartridge 100 receives the page and processes the message embedded within the page.

66. As such, the pager cartridge of Eck communicates messages over a very specific communication network (i.e., a paging system) requiring specific communication protocols and hardware for the transmission of such messages.

67. Eck describes a decentralized peer-to-peer (P2P) network architecture that operates using push-based communication. In Eck's primary embodiment, "PagerWorld" is described as a "virtual community for the network of all users having pager cartridges," where players can find "pen-pals" and "view message boards." 10:20-44.

68. P2P network architecture is decentralized because critical data such as address books and messages are stored and maintained locally on the client devices, specifically within the game cartridges themselves. 7:7-17. Communication between users is not arbitrated by a central server; instead, the system enables "bidirectional

transmission of messages” and “broadcasts to all pagers” (16:42-45; 20:8), which are hallmarks of a peer-to-peer or broadcast-based system. This communication is inherently push-based, relying on a system that actively sends data to be received by client devices, as evidenced by Eck’s disclosure of notification circuitry that causes the device to vibrate or beep “when a message is received.” 6:44-49.

69. While Eck describes its P2P architecture operating over a pager infrastructure, the patent explicitly teaches that this architecture is infrastructure-agnostic. Eck states that its invention “may also be applied to other wireless technologies such a GSM [] and WAP” (25:17-20) and can be run on other platforms like game consoles or PCs connected to the Internet via a “modem or other network interface means.” 27:51-52. This confirms that Eck’s peer-to-peer architecture is designed to function on general internet and cellular infrastructures without modification.

70. Eck notes that the pager cartridge is arranged in such a manner to allow other cartridges to be “piggy-backed” onto the pager cartridge when the pager cartridge is coupled to (i.e., inserted into the slot) of the game machine. 5:38-43. In particular, Eck states (7:23-35) that:

Pager cartridge 100 is provided with first and second connectors 146 and 148. First connector 146 is configured to permit pager cartridge 100 to be selectively attached and electrically connected to game machine 10 via the connector 40 of game machine 10. In this way, the electronic components of the pager cartridge are

accessible to and controllable by CPU 26 of game machine 10 and data (including messages) can be communicated between pager cartridge 100 and game machine 10. Second connector 148 permits game cartridges, read/write memory cartridges, digital cameras cartridges. GPS cartridges and the like to be electrically connected (“piggy-backed”) to pager cartridge 100 and, via connector 146 of pager cartridge 100, to game machine 10.

71. Eck further notes that a user of a pager cartridge can become a player in a virtual community for all users having a pager cartridge (which Eck refers to as “PagerWorld”). 10:20-23. The players are represented by a “persona character as players interact with each other (e.g., by sending messages and playing games).

72. As described below, Eck describes various embodiment using the pager cartridge, including both “traditional paging functions” and “be[ing] used in game play.” 9:60-61.

E. Other Art Relied Upon by Petitioners

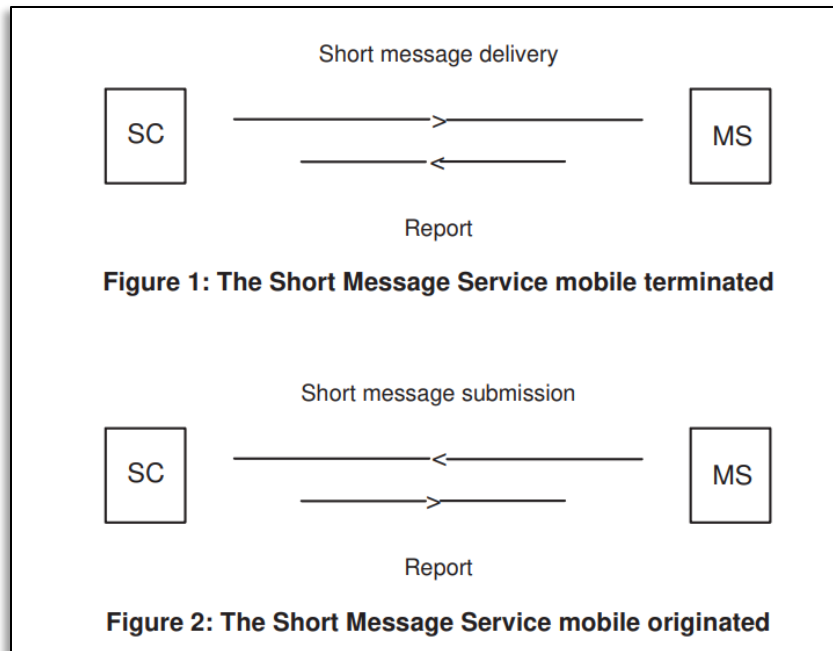
73. Although Petitioners and Houh do not assert any other art in combination with either Randall-Forsyth or Pelkey-Eck, Houh nonetheless relies on other art to address limitations not disclosed in either Randall-Forsyth or Pelkey-Eck. Houh also, refers to these documents in his summary of Randall—despite not being referenced or disclosed in Randall. Thus, I provide a brief description of those references below.

1. GSM-SMS Standard (EX.1015)

74. ETSI TS 123 040 V3.6.0, is the September 2001 release of the ETSI technical specification for Short Message Service (SMS) on GSM. In general, this document describes the protocols required and used for SMS services for GSM/UMTS networks. GSM-SMS Standard, 7.

75. Short Message Service exists to provide the ability to deliver short messages and submit short messages. Essentially, there are two elements, (1) the service center (SC) that relays messages using a “store-and-forward” protocol, and (2) the mobile station (MS) (i.e. user equipment)¹ that sends and receives messages. GSM-SMS Standard, 9-10, 11. Simply, the network operates by receiving messages from an MS, storing them in an SC, and relaying them to another SC. The basic function of this network is depicted in Figures 1 and 2:

¹ The GSM-SMS Standard also broadly refers to the term Short Message Entity (SME). SME is a broader term for any device capable of sending and receiving short messages and includes but is not limited to an MS. GSM-SMS Standard, 10.



76. The short message may contain up to 140 octets or 140 bytes of information. GSM-SMS Standard, 11, 70. Each message is contained in a Transport Protocol Data Unit (TPDU) that comprises of a protocol header and the up to 140bytes of user data (TP-UD). GSM-SMS Standard, 11-12, 60. The primary TPDU's are SMS-DELIVER, which is a message being sent from the SC to an MS, and the SMS-SUBMIT, which is a message being sent from an MS to the SC. GSM-SMS Standard, 12. When an SMS-SUBMIT TPDU is transmitted from an originating MS to the SC, it is converted to an SMS-DELIVER TPDU at the SC to be sent to the destination MS.

77. The SMS-SUBMIT TPDU contains only the following header information ahead of the TP-UD:

Abbr.	Reference	p1)	p2)	Description
TP-MTI	TP-Message-Type-Indicator	M	2b	Parameter describing the message type.
TP-RD	TP-Reject-Duplicates	M	b	Parameter indicating whether or not the SC shall accept an SMS-SUBMIT for an SM still held in the SC which has the same TP-MR and the same TP-DA as a previously submitted SM from the same OA
TP-VPF	TP-Validity-Period-Format	M	2b	Parameter indicating whether or not the TP-VP field is present.
TP-RP	TP-Reply-Path	M	b	Parameter indicating the request for Reply Path.
TP-UDHI	TP-User-Data-Header-Indicator	O	b	Parameter indicating that the TP-UD field contains a Header.
TP-SRR	TP-Status-Report-Request	O	b	Parameter indicating if the MS is requesting a status report.
TP-MR	TP-Message-Reference	M	l	Parameter identifying the SMS-SUBMIT.
TP-DA	TP-Destination-Address	M	2-12o	Address of the destination SME.
TP-PID	TP-Protocol-Identifier	M	o	Parameter identifying the above layer protocol, if any.
TP-DCS	TP-Data-Coding-Scheme	M	o	Parameter identifying the coding scheme within the TP-User-Data.
TP-VP	TP-Validity-Period	O	o/7o	Parameter identifying the time from where the message is no longer valid.
TP-UDL	TP-User-Data-Length	M	l	Parameter indicating the length of the TP-User-Data field to follow.
TP-UD	TP-User-Data	O	3)	

78. Meanwhile, the SMS-DELIVER TPDU contains only the following header information ahead of the TP-UD:

Abbr.	Reference	p1)	p2)	Description
TP-MTI	TP-Message-Type-Indicator	M	2b	Parameter describing the message type.
TP-MMS	TP-More-Messages-to-Send	M	b	Parameter indicating whether or not there are more messages to send
TP-RP	TP-Reply-Path	M	b	Parameter indicating that Reply Path exists.
TP-UDHI	TP-User-Data-Header-Indicator	O	b	Parameter indicating that the TP-UD field contains a Header
TP-SRI	TP-Status-Report-Indication	O	b	Parameter indicating if the SME has requested a status report.
TP-OA	TP-Originating-Address	M	2-12o	Address of the originating SME.
TP-PID	TP-Protocol-Identifier	M	o	Parameter identifying the above layer protocol, if any.
TP-DCS	TP-Data-Coding-Scheme	M	o	Parameter identifying the coding scheme within the TP-User-Data.
TP-SCTS	TP-Service-Centre-Time-Stamp	M	7o	Parameter identifying time when the SC received the message.
TP-UDL	TP-User-Data-Length	M	l	Parameter indicating the length of the TP-User-Data field to follow.
TP-UD	TP-User-Data	O	3)	

79. As shown above, most of the information included in the TPUP headers is the information required by the devices on the network to facilitate the message's

transmission and interpretation. For example, TP-MTI indicates the type of TPUD like SMS-SUMBIT or SMS-DELIVER, and TP-PID identifies the layer protocol. However, some header fields are reserved for the TP-UD. TP-UDHI is an optional field that indicates that the user data includes its own header information. TP-UDHI is a single binary, a 0 for no header or a 1 for a header. GSM-SMS Standard, 60. TP-UDL merely states how much user data was sent in the user data field.

80. When there is a user data information header, even that header is prescribed by the standard. It generally consists of four elements, (1) the length of the user header data (a single octet), (2) an information-element-identifier (a single octet), (3) the length of the information (a single octet), and (4) the information. Elements 2 through 4 may be repeated if more than a single type of information exists. GSM-SMS Standard, 60. The information-element-identifier is particular to GSM-SMS protocol and is strictly defined as shown below. The majority are specific to predefined data types for GSM short messages. *See generally*, GSM-SMS Standard, 60-78. However, one information-element-identifier is distinct from GSM-SMS protocol and is reserved for Wireless Control Message Protocol, which is associated with Wireless Application Protocol (WAP), which I discuss later.

VALUE (hex)	MEANING
00	Concatenated short messages, 8-bit reference number
01	Special SMS Message Indication
02	Reserved
03	Value not used to avoid misinterpretation as <LF> character
04	Application port addressing scheme, 8 bit address
05	Application port addressing scheme, 16 bit address
06	SMSC Control Parameters
07	UDH Source Indicator
08	Concatenated short message, 16-bit reference number
09	Wireless Control Message Protocol
0A	Text Formatting
0B	Predefined Sound
0C	User Defined Sound (iMelody max 128 bytes)
0D	Predefined Animation
0E	Large Animation (16*16 times 4 = 32*4 =128 bytes)
0F	Small Animation (8*8 times 4 = 8*4 =32 bytes)
10	Large Picture (32*32 = 128 bytes)
11	Small Picture (16*16 = 32 bytes)
12	Variable Picture
13-1F	Reserved for future EMS features (see clause 3.10)
20	RFC 822 E-Mail Header
21-6F	Reserved for future use
70 – 7F	(U)SIM Toolkit Security Headers
80 – 9F	SME to SME specific use
A0 – BF	Reserved for future use
C0 – DF	SC specific use
E0 – FF	Reserved for future use

81. What is both implied in the GSM-SMS Standard and known to a POSITA is that the short message header data is temporary and meant to be discarded. One, as the message is transmitted through the GSM-SMS network the header data is changed as the TPUD type changes from SMS-SUBMIT to SMS-DELIVER. Specifically, the GSM-SMS Standard defines the exact structure of the protocol message headers, and there are no fields for the data Dr. Houh identifies, such as sender name or Forum name. The SMS-SUBMIT TPDU header contains protocol-specific parameters like TP-Message-Type-Indicator (TP-MTI), TP-Destination-Address (TP-DA), and TP-Protocol-Identifier (TP-PID), which are used by the network's Service Center (SC) to route the message. When the message is forwarded to the recipient, it is converted into an SMS-DELIVER TPDU with a

different header structure that contains information like the originating address (TP-OA) and a timestamp from the Service Center (TP-SCTS). This protocol-level data is transient, processed and often discarded by the network layers, and is not designed to be persistently integrated with the user data payload (TP-UD).

82. Dr. Houh's theory incorrectly conflates this temporary network routing data with the application-layer content, which is the only part of the message that persists within the Forums application. As shown above, there are no reserved octets of data to preserve any of the header data from originating message in a delivered message header or data field. Also, the character of the data in the header is computer specific data relevant to ensuring proper delivery and interpretation of the data contained in the TPUD. Commands explaining whether duplicate data should be discarded or an indicator of how long a message should remain valid is not relevant to the user data included in the TPUD and strictly a necessity of the network protocol.

83. Nowhere in the GSM-SMS protocol header is there anything that allows or points to the inclusion of sender name, date/time, and/or associated persona image as Petitioners allege are encapsulated in the protocol. Petition, 40-41, 77.

2. WDP (EX.1014)

84. The June 14, 2001, Wireless Datagram Protocol (WDP) describes a part of the WAP architecture's transport layer. The WAP Forum designed the WDP to

adapt the transport layer to operate with features of underlying bearer networks. WDP, 5. The bearer network being a service provider like a GSM or CDMA mobile network. When WAP was created, the WAP Forum sought to develop protocols, features, and services to bring a “web-centric application model to wireless data service.” EX.1013, 4, 12. WAP is meant to develop web interface that addressed the issues with wireless networks of the time like limited capability mobile devices, inferior data networks compared to wired networks, and varying types of mobile networks (i.e. non-standardized protocols). EX.1013, 11.

85. The WDP addresses how WAP can operate over varying wireless bearer networks providing adaptation protocols for each type of bearer network. WDP, 14-15. Thus, the WDP defines the datagrams necessary to operate over different bearer networks. Fundamentally, WAP segments data as packets for data transport and reassembles those packets when the data arrives at its destination. Thus, WAP must operate on a network that support packetized data transport. *See* WDP, 38. The WDP datagram protocol required by WAP only needs the identification of a destination port, source port, and a segmentation and reassembly feature for data transmission. WDP, 38. However, in the event a bearer network does provide a segmentation and reassembly feature a WDP adaptation is used. WDP, 38.

86. For bearer networks that already support packetized data transport and use the standard User Datagram Protocol (UDP) associated with Internet Protocol, WAP requires no adaptation and has adopted UDP as compatible with WAP. WDP, 38. For example, wireless networks such as CDMA Circuit Switched Data and GSM GPRS that already use UDP require no WDP adaptation for WAP. WDP, 38.

87. However, for other bearer wireless networks, such as SMS networks, that do not support packet transport of data that is segmented and reassembled, an adaptation is required. As such, to increase the availability of WAP over such insufficient networks, the WDP defines protocols to adapt to these networks. One such network that requires adaptation is the GSM-SMS network relied upon by petitioners. WDP, 38-41.

88. The WDP recognizes that GSM-SMS already has a predefined header format for SMS and is thus defined by the GSM-SMS Standard. WDP, 38. However, a segmentation and reassembly protocol must be implemented for WAP to operate over the GSM-SMS network. In some instances, the GSM-SMS concatenated message protocol may be used for the segmentation of data. Using the long information-element in GSM-SMS, SMS data can be broken down into anywhere from 1 to 255 segments. The WDP uses the TP-UDHI described above to indicate a concatenated message and use the TP-UD header to reference the number of the datagram, give the total segments in the datagram, and identify the current segment

number in the datagram. WDP, 39. Otherwise, WDP uses its own datagram header in the TP-UP to perform the segmentation and reassembly of the data within the TP-UD. WDP, 39-41. The WDP prescribed GSM-SMS header is shown below:

0	1	2	3	4	5	6	7
"/							
"/							
"S"							
"C"							
"K"							
"L"							
Destination port MSB (High hex)							
Destination port MSB (Low hex)							
Destination port LSB (High hex)							
Destination port LSB (Low hex)							
Originator Port MSB (High hex)							
Originator Port MSB (Low hex)							
Originator Port LSB (High hex)							
Originator Port LSB (Low hex)							
Reference number (High hex)							
Reference number (Low hex)							
Total number of <i>segments</i> (High hex)							
Total number of <i>segments</i> (Low hex)							
Segment count (High hex)							
Segment count (Low hex)							
<space>							
1 - n 7-bit characters of User Data							

Figure 6-3: Example of a WDP header for compatibility with legacy GSM networks

89. Even with this adaption protocol, GSM-SMS header information limits the number of packets that can be sequentially numbered. In the case of concatenated packets, that is 255. WDP, 39. As such, an 8bit short-form reference number risks having overlapping reference numbers that will cause improper reassembly. WDP,

38-39. Even the long 16bit reference number lessens but does not eliminate the risk of having overlapping reference numbers. WDP, 39.

90. Nowhere in the WDP protocol header is there anything that allows or points to the inclusion of sender name, date/time, and/or associated persona image as Petitioners allege are encapsulated in the protocol. Petition, 40-41, 77.

VII. DEFICIENCIES OF THE PETITION

A. Obviousness Based on Ground 1 – Randall-Forsyth

91. Petitioners and Houh opine that a POSITA would be motivated to combine Randall and Forsyth. I disagree with Petitioners and Houh.

92. The references, alone or in combination, fail to teach or suggest at least the claim limitation “an application-based information channel” (into which content from a mobile device, including captured content from a mobile device, is to be inserted), as generally recited in the independent claims.

93. Independent Claims 1 and 9 recite, in part, “a first interface permitting designation of at least one content item, via a mobile device, for insertion into an application-based information channel, the at least one content item comprising media data captured by the mobile device”.

94. Independent Claim 12 recites, in part, “designating at least one content item, via a mobile device, for insertion into an application-based information

channel, the at least one content item comprising media data captured by the mobile device”.

95. Independent Claim 17 recites, in part, “designate at least one content item for insertion into an application-based information channel”.

96. Independent Claim 21 recites, in part, “a first interface on a mobile device permitting a user to designate at least one content item for insertion into an application-based information channel, the at least one content item comprising media data captured by the mobile device”.

97. Independent Claim 22 recites, in part, “providing at least one content item to at least one server for insertion into an application-based information channel using the first interface”.

98. Randall and Forsyth are devoid of any teaching or suggestion of at least the claim limitation “an application-based information channel” (into which content from a mobile device, including captured content from a mobile device, is to be inserted), as generally recited in the independent claims.

99. The references, alone or in combination, fail to teach or suggest at least the claim limitation “information associated with at least one wireless networking functionality of the mobile device” (which is integrated with content captured from the mobile device to create an integrated content item), as generally recited in the independent claims.

100. Independent Claims 1 and 9 recite, in part, “integrat[ing] the at least one content item and information associated with at least one wireless networking functionality of the mobile device to generate at least one integrated content item”.

101. Independent Claims 12, 17, and 22 recite, in part, “at least one content item and the information associated with said at least one wireless networking functionality of the mobile device are integrated to generate at least one integrated content item”.

102. Independent Claim 21 recites, in part, “wherein information associated with at least one wireless networking functionality of the mobile device is integrated with the at least one content item to generate at least one integrated content item”.

103. Randall and Forsyth are devoid of any teaching or suggestion of at least the claim limitation “information associated with at least one wireless networking functionality of the mobile device” (which is integrated with content captured from the mobile device to create an integrated content item), as generally recited in the independent claims.

1. Improper Combination of Randall and Forsyth

104. Based on my review of the petition and the expert declaration, it is my view that the petitioners and their expert are treating Randall and Forsyth as describing a singular system and application. There are numerous instances in the Petition and the Expert’s declaration that led me to this conclusion, including:

- a. The Petition refers repeatedly to the “Forums server,” as if it were a single, identified server. Petition, 18 (“**The Forums server** performs...”). Despite discussing a singular “Forums server,” the Petition refers to servers of each of Forsyth and Randall and cites to Houh’s discussion of both. *Id.* citing Ex.1003, ¶87; *see also id.* (“**the server** includes ‘a memory’...”; “**The Forums server** acts as ‘a store for resources...’”).
- b. Petitioners reference “Forums” in Randall and Forsyth as if they inherently represent the same underlying infrastructure and operational context, despite Randall focusing primarily on an extensible database architecture for sharing application data and Forsyth emphasizing application-independent group objects for communication.
- c. The Petition and expert declaration blend descriptions of Randall’s database features, such as server-side extensibility, with Forsyth’s completely separate concept of portable, application-agnostic group objects, creating a misleading impression that these distinct features naturally complement or directly integrate.
- d. Petitioners assert without adequate justification that Forsyth’s server-side logic for handling message forwarding (based entirely on group object data) could seamlessly merge with Randall’s independent

concept of data-sharing infrastructure, even though Forsyth explicitly describes its group objects as fundamentally "application independent" and "content independent," which directly conflicts with Randall's specific, extensible application-data approach.

e. The Petition conflates Randall's generic mentions of messaging pathways (e.g., GSM, WAP) with Forsyth's explicit client-server communications in "Forums," despite no clear teaching in either reference that such messaging protocols could or would integrate directly into a combined "application-based information channel" as recited in the challenged patent claims.

105. This blending of Randall and Forsyth into a single conceptual framework lacks explicit support in either reference and improperly uses the challenged patent's claims as a hindsight-driven roadmap.

106. I see no basis for Petitioners' and their expert's approach to treating the disclosures of each of Randall and Forsyth as directed to a single Symbian infrastructure or single Forum application. The fact that each refers to "Forums" does not change my opinion. Indeed, I have worked on and am aware of applications that, despite having the same name over time, changed materially in their structure and/or operation. One that comes to mind is "Google Hangouts," which has evolved significantly from its initial text-based chat and simple video conferencing

functionalities to a fully integrated collaborative platform (Google Meet and Google Chat), involving substantial changes in underlying infrastructure, operational logic, and communication protocols. This demonstrates that a shared name alone does not justify treating distinct references as a unified disclosure.

2. Lack of Motivation to Combine Randall and Forsyth

107. I have reviewed Houh's declaration, Ex.1003, relating to his opinion that a POSITA would have been motivated to combine Randall and Forsyth. *See* Ex.1003, ¶¶75-81. I disagree that Houh has set forth a valid motivation.

108. He begins by arguing that a "POSITA would have been motivated to combine Forsyth's teachings regarding the use of group objects and additional features and functions to enhance the Forums service taught by Randall." *Id.*, ¶75. Clearly, he is relying on the notion of "enhance[ing] the Forums service" of Forsyth with Randall's infrastructure, including its extensible database. I disagree this is a motivation as Forsyth already describes the use of "content and application independent group objects." Forsyth, 3:14-18. Forsyth also describes group objects residing on a remote server and the use of pointers to such a central server (*id.*, 3:19-31), which indicates the use of a central database.

109. Houh also points to Randall's network infrastructure and client-server architecture (Ex.1003, ¶75); however, Forsyth itself already acknowledges the use of a client-server architecture (Forsyth, 3:24-31).

110. Houh notes that Forsyth explicitly motivates the combination by virtue of stressing the benefits of group objects, namely, because ““a group created in one application (e.g. for text based instant messaging) can immediately be used in other applications (e.g. a diary/agenda application could use that same group as the recipient list for an invitation to a meeting)’ [and] ‘data specifically created for one group and in one application can be re-used in a different application and the data viewed appropriately for that different application.’” Ex.1003, ¶77 quoting Forsyth, 2:27-32, 2:34-37. But this “strength” has nothing to do with Houh’s premise of “enhance[ing] the Forum service.” The benefit described by Houh relates to improving other applications and their implementations.

111. Moreover, a POSITA would not have been motivated to combine the two because Forsyth’s described system already accomplishes the goal of group communications without needing Randall’s specific infrastructure. Forsyth describes a server that handles message storage, threading, and distribution to group members defined by the group object. This implies a self-sufficient server-side logic for the Forums application. Importing Randall’s complex, extensible i-server, with its separate concepts of i-Tags and i-Groups for granular data access control, would be a redundant and needlessly complex engineering task. It would be akin to replacing a functional engine with a much larger, more complicated one for no clear

performance gain in the context of the stated invention of enabling portable group communications.

112. Furthermore, A POSITA would recognize that Randall and Forsyth describe fundamentally different, and arguably conflicting, system architectures. Randall describes a data-centric architecture where the extensible database is the core, and applications are built to leverage its extensible attributes and i-Groups for access control. The system is designed for persistent, structured data sharing. In contrast, Forsyth describes a communication-centric model where the “group object” is a lightweight, application-agnostic entity designed for portability across disparate applications like messaging, calendars, and voice calls.

113. A POSITA would understand that integrating Forsyth’s portable, self-contained communication objects into Randall’s monolithic and highly structured database architecture would be counterintuitive, adding unnecessary complexity and undermining the very application-independence that is the stated foundation of Forsyth’s invention.

114. As such, I view Houh as using the ’578 patent as a roadmap for his supposed motivation to combine Forsyth and Randall.

3. Ground 1 Lacks Disclosure of Limitations of Independent Claims

a) Claims 1, 8, 9, 12, 16, 17, 21, and 22 “application-based information channel”

(1) Forums’ reliance on group objects is application-independent

115. Petitioners assert that an individual Forum as used in the Forums application is an “application-based information channel.” I disagree with that assertion. An individual forum within the application “Forums” is not application-based, it is “group objects” based.

116. As discussed above, the Forums service of Forsyth relies on group objects, not on distinct application instances. In fact, Petitioners admit as much with their definition of group object as something that “defines or references members of the group in a way that enables communication to take place from the device and all other members of the group.” Ex.1003, ¶71, citing Forsyth 2:6-9. The expert then opines “[t]his group object is application independent.” Ex.1003, ¶71. Forsyth agrees – “No earlier system includes the concept of the content and application independent 'group' object. Prior art groups, in contrast, are all application specific.” Forsyth, 2:37-39, emphasis added. Forsyth states explicitly that it is not application-specific and therefore cannot be “application based.”

117. Because of that independence, “a group created in one application ... can immediately be used in other applications.” Forsyth, 2:28-30. This is the very

definition of being application agnostic, not application-based, and as shown above, is the main point of novelty of the Forsyth patent. Forsyth goes on to say that “a user can organize people and entities (e.g., companies, clients etc.) into different group objects and can re-use that group object in many different applications (e.g. instant messaging, voice, e-mail etc.). Forsyth, 2:28-30 (emphasis added). These passages show that the communication channel in Forums is actually a data structure decoupled from any single application context. The Forum application is just one of many applications that may consume the very same group object. Put simply, a data construct (group object) that can be lifted intact from one application and reused in another is the antithesis of “application-based.”

118. From a technical implementation standpoint, making Forsyth's channel application-based would require significant, undisclosed re-engineering. A POSITA would understand that to bind the channel to a specific application, the system would need to introduce new mechanisms, such as creating application-specific namespaces for each group object or tying the object's lifecycle and permissions directly to the session of the parent application (e.g., the Messaging app versus the Calendar app). This would prevent the very cross-application reuse that Forsyth identifies as its central novelty. Because neither Randall nor Forsyth teaches or suggests such application-specific binding logic, and doing so would directly contradict Forsyth's stated purpose, Dr. Houh's assertion that a Forum is

application-based as claimed is technically unsupported. The Petition's mapping therefore substitutes an application-independent, data-level group object for the claim's application-specific channel, leaving a critical gap.

**(2) A POSITA would not view Randall/Forsyth as
'application-based'**

119. From the standpoint of a POSITA circa in 2002, the Petition's premise collapses once one examines how Symbian's Forums actually stores group membership data. Forsyth explains that each Forum relies on a group object that "defines solely the identities of members of a group" and is therefore "application (and hence also content) independent," expressly so it can be lifted unchanged into a diary, voice, e-mail, gaming, or any other application. Forsyth, 2:25-27. The '578 claims, by contrast, require an "application-based information channel", a medium whose existence, membership, and data flow are anchored to a single software application selected on the mobile device. '578 Patent, 18:60-62².

² "Also, the system provides a platform for the development of a wide variety of personalized content applications for users of mobile devices, thereby allowing wireless network service providers not only to increase their subscriber base, but also to reduce turnover in their subscriber base." This citation indicates that the mobile device user is running an application on their device.

120. Because Forsyth’s stated design goal is cross-application portability, a POSITA would have recognized that mapping such an application-independent structure onto the ’578 Patent’s channel would demand a fundamental redesign: the group object would need to be cloned or irrevocably bound to a specific application context; server logic would need new namespace and access-control layers to prevent other apps from re-using the object; and the client would have to transmit extra metadata so the server could disambiguate a specific group object in, for example, a Messaging app from the exact same object when invoked by a Diary app. None of these adaptations is taught, or even hinted at in Randall or Forsyth, and Houh’s declaration merely states that a POSITA “would have been motivated to combine” Forsyth’s group objects with Randall’s Forums infrastructure, relying on Forsyth’s portability benefits without addressing the substantial, undocumented re-engineering that would be required. Ex.1003, ¶78. Accordingly, equating an individual Forum with an “application-based information channel” is technologically untenable and rests on hindsight-driven speculation rather than concrete disclosure.

b) Petitioners fail to identify anything in Randall or Forsyth that teaches or suggests the claimed “information associated with at least one wireless networking functionality of the mobile device” (Claims 1, 8, 9, 12, 16, 17, 21, and 22)

121. As an initial matter, my opinion is that the “encapsulation” theory as put forth in the Petition is not disclosed in Randall. Randall shows only posting of application-layer data, never handset “encapsulation.” An example of this is where Randall describes opinion-poll users who “post their poll answers to the i-server,” intending to illustrate a simple upload of field values, not a packet-building step. Randall, p. 74. Likewise in Randall, it states that the database is “a remote server to which data is posted ... using a self-describing meta-language, such as XML,” again framing the client’s role as a direct data post, with no mention of SMS, WAP, or header creation. Randall, p. 4 And, Randall’s Figure 6 merely lists alternative transport pipes, “SMS/WAP/http/SMTP” beneath a generic “SOAP” layer, without attributing any header-generation work to the handset.

122. Therefore, in my opinion, in Randall’s narrative, diagrams, and examples, the mobile device is always a field-value publisher calling server APIs; no passage depicts the phone wrapping data in a protocol envelope or deriving header fields. Petitioners’ “encapsulation” theory therefore lacks any support in Randall.

123. Forsyth's mobile client never encapsulates its message in any transport-layer packet. Forsyth's states that communication relies on an "application independent object" holding only group-member identities (Abstract) and that, after a user creates a message, "these two are sent to the message server; the message server stores these two objects and forwards a copy of the message." Forsyth, 6:8-10. Nothing in Forsyth instructs the handset to add GSM, WAP, or other protocol headers, and throughout the disclosure there is no mention of "encapsulate," "header," "bearer," or similar terms. Because the handset simply transmits application data to a server that handles delivery, Forsyth provides no disclosure of an encapsulation step, leaving the "information associated with at least one wireless networking functionality of the mobile device" imitation unsatisfied.

(1) There is no technical basis for Petitioners' assumption that the handset must provide either the sender identity or the Forum name before transmitting a Forums message.

124. Forsyth places that logic squarely in the server: when a Forum is first created "the message server stores these two objects and forwards a copy of the message to each of the people on the address list," and for every later reply "the new message is sent to the server, which then forwards on the increment to all the people on the current (server-maintained) address list." Forsyth, 6:9-11, 19-22. Because the server already knows which user is logged in and which Forum thread is active, the client merely selects an existing Forum from its personalized list, "After clicking on

a Forum title in the summary view, the user is shown the messages posted to that Forum, as shown in FIG. 7”, and, when the user chooses “Forum reply,” “a new message is posted to the Forum.” Forsyth 6:37-39, 53-55.

125. Nothing in Forsyth instructs the handset to embed its own name or the Forum name in the outbound payload; since those attributes are implicit in the session context the server maintains. Accordingly, Petitioners’ theory that the client must provide and transmit such header fields to satisfy limitations 1[A]/9[B] and 1[C]/9[E] is unsupported by the cited references and contradicted by Forsyth’s explicit client-server architecture.

(2) Information about the Sender name, date/time, and Forum’s name is not “information associated with wireless networking functionality.”

126. Petitioners’ own mapping alleges that a Forum is the very “application-based information channel” recited in the claims (Petition, pp. 24-25, 28). By definition, therefore, any data that merely identifies the Forum itself, its title (“Naked Chef”), the list of invitees, nicknames, timestamps, and so forth, is information about the channel. It is not, and cannot become, “information associated with ... wireless networking functionality of the mobile device.”

127. A POSITA would technically distinguish this channel-identifying information, which exists at the application layer, from information associated with... wireless networking functionality, which exists at lower layers of the network

stack. For example, information such as the GSM Cell ID, signal strength, or the specific bearer being used (e.g., GPRS vs. CSD) would be considered wireless networking functionality information. The user's name (Steve) and the Forum's title (Naked Chef), however, are application-level data defined and interpreted by the Forums application itself, not by the underlying wireless network. The claims require integrating the latter (networking functionality info) with the content, whereas Forsyth only discloses displaying the former (application data) alongside the content. This represents a critical, unbridged gap in Petitioners' obviousness argument.

128. Forsyth reinforces that distinction. The system stores channel data in a “group object” that “defines solely the identities of members of a group: as such, it is content and application independent”. Forsyth, 5:16-17. Each Forum that a user sees in Figures 2-9 is simply a reuse of that object: “Each group exists as an application-independent object and can hence be accessed by different applications”. Forsyth, 5:55-57.

(3) Forsyth does not disclose WAP, and teaches away from GSM

129. As previously, Petitioners' “encapsulation” mapping relies on the premise that the handset wraps each Forum post in a WAP or GSM-SMS packet (Petition, pp. 32-33), yet **Forsyth never once uses the terms “WAP” or “Wireless Application Protocol.”** In Forsyth, every client-side action ends when the user

message is handed to a *message server* (Forsyth, 6:8-9); the specification is silent on any lower-layer packaging the handset might perform. Because the reference contains no discussion, textual or graphical, of WAP headers, bearer operation, or other transport details, it cannot supply the “information associated with ... wireless networking functionality” that Petitioners need for limitation 1[B]/9[D].

(4) The mobile device does not determine message type or content type.

130. Randall identifies several pre-configured transports, “SMS/WAP/http/SMTP” (Randall, Figure 6), and explains that its framework offers “the ability to use variable delivery mechanisms and perhaps conceal this selection process to the developer”. Randall, p. 56. Because the framework itself, rather than the handset, selects among these fixed paths and even hides the choice from developers, Randall contains no disclosure in which the mobile device first provides its own wireless-networking capabilities and then picks a message or content type.

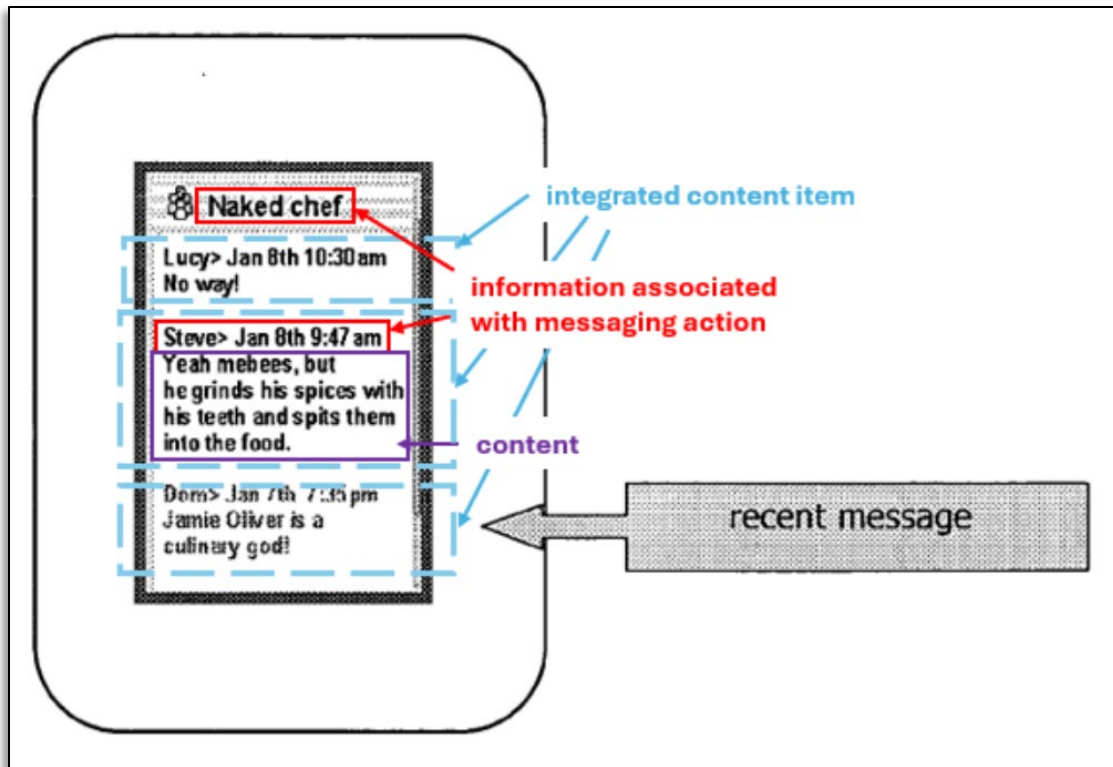
131. Forsyth likewise places transport decisions outside the handset. It teaches that “a message thread is stored only on the server ... but is also replicated on each client device”, and notes that “Communication can be over any bearer or protocol supported by the device.” Forsyth 4:35-37. The server governs storage and distribution, while the client merely receives or displays the chosen format; Forsyth never states that the handset inspects its interfaces or selects a message or content type based on wireless capability. Accordingly, neither reference teaches the

disputed limitation, and both leave the mobile device without any role in determining message or content type.

- c) Petitioners fail to identify “integrat[ing] the at least one content item and information associated with at least one wireless networking functionality of the mobile device to generate at least one integrated content item” (Limitation 1[B]/9[D])**

132. Claim limitation 1[B]/9[D] requires integrating “the at least one content item” with “information associated with at least one wireless networking functionality”. While I acknowledge that Randall and Forsyth mention GSM (*See* Randall, 1:11-13; Forsyth, 1:22-25), I disagree with Petitioners and Houh that the Randall-Forsyth combination teaches or even suggests this.

133. In addressing 1[B]/9[D], Petitioners and Houh continue their reliance on sender name, date/time, and Forum name as the “information associated with at least one wireless networking functionality” being integrated with captured content as encapsulated within a GSM-SMS or WAP protocol message. They explain their argument with reference to their annotated Forsyth, Figure 7:



[T]he sender name and Forum name are included in the Forums message encapsulated in the protocol message. (Forsyth, 6:36-40.) The server integrates this “*information associated with at least one networking functionality*” (e.g., sender/poster identity, Forum name, date/time) with the “*content item*” (e.g., photo/image, music/audio file, graphic, and/or text, etc.) “*to generate*” a “*integrated content item*” (entry) and inserts this “*integrated content item*” into the message/communication object for the Forum. (EX-1003, ¶¶170-72).

Petition at 40-41.

134. I disagree. Neither Randall nor Forsyth provides an explicit teaching of the details of the wireless messaging functionality of GSM-SMS or WAP (a point that Houh agrees with (Ex.1003, ¶160)). Moreover, Forsyth does not provide any indication as to the specific information relied on, sender name, date/time, and

Forum name, being provided along with the asserted captured content (e.g., text message) in the protocol message sent to the server.

135. Petitioners' and Houh's reliance on what is displayed in Figure 7 is unfounded. What is displayed is not an indication of what information is included in a message within Forums. For example, just because "Steve" or "Naked Chef" is displayed does not mean such information was integrated from the mobile device with the captured content.

136. To the contrary, Forsyth suggests that such information is not included in such a message. Figures 6-9 of Scenario 1 help make the point. As shown and described with reference to Figures 6-9, a user selects a previously established Forum (e.g., Naked Chef) (Figure 6). Forums thus has an indication of the specific Forum. 6:27-29; 6:36-39. After selecting "Forum Reply," the user enters a text message, which is posted to the selected Forum. 6:53-57. Contrary to Petitioners and their expert, there is no reason for the mobile device message to include in the message the user identity, as the system already knows which user is logged into the system (having presented him/her with their individualized list of available Forums), or the Forum name (the user having already selected the particular Forum). The server thus may add any username, timestamp or Forum name; there is no indication that the mobile device provided this information from it wireless networking

functionality and sent it to the server, as argued by Petitioners and required by the claim language.

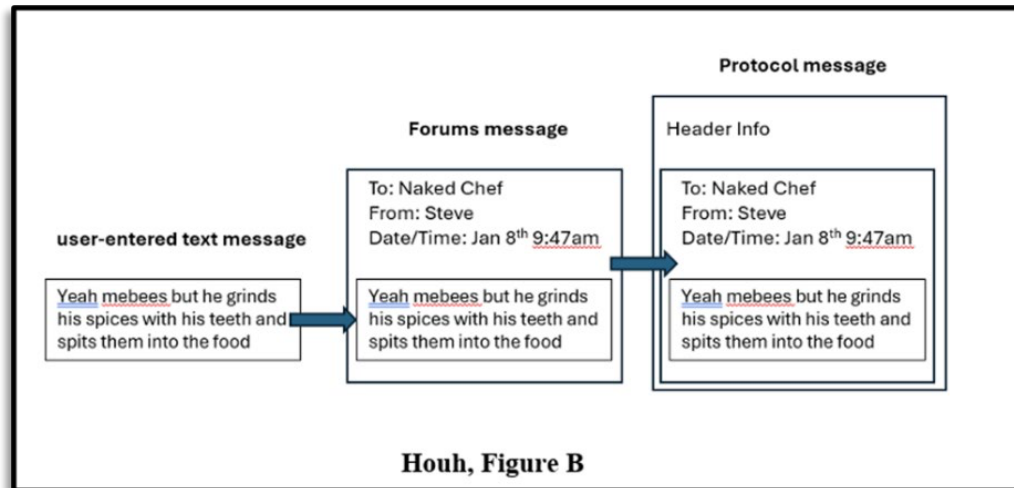
137. Petitioners and Houh also make passing reference to a protocol message including “message type” and “content type.” Petition, 39 citing Ex.1003, ¶¶164-165. In any event, as discussed above, such information is not “integrated” and is inconsistent with the ’578 Patent’s specification to the extent it discloses use of WAP but never explicitly relies on message type or content type as the wireless networking information.

138. Moreover, neither the GSM-SMS nor the WAP protocols disclose the missing limitations from Randall-Forsyth as Petitioners allege. As discussed above in Section, VI.E, the protocol headers prescribed by those standards are strictly limited to specific data. Meanwhile, Petitioners and Houh claim that because every GSM-SMS requires a header, that data is necessarily integrated with the content. However, Petitioners and Houh fail to show how Randall or Forsyth discloses the integration of any of the prescribed header data or why a POSITA would be motivated to integrate any of that protocol header data with the SMS content.

139. Petitioners and Houh claim that sender name, Forum name, and/or date/time are the disclosed *information associated with at least one wireless networking functionality of the mobile device*. However, none of that “information” can be included in an SMS protocol header. As shown above, there is no field for

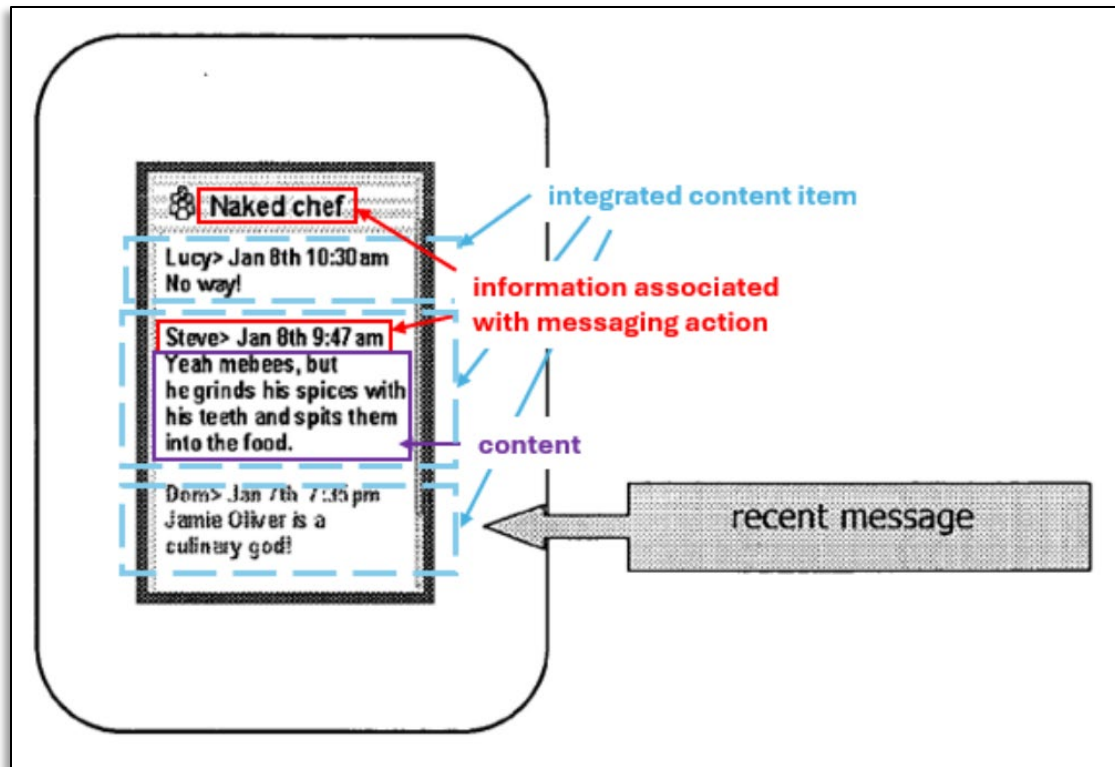
sender name, Forum name, and/or date/time or equivalent thereof in a short message header or WAP header. Moreover, the SMS-SUBMIT TPDU relied upon by Houh is only the protocol message as sent from the user device to the MS. In the case of Forums, the Forums server would be the SME, i.e. the destination for the SM. Thus, when the MS pushes the SM to the Forums server, the SMS-SUBMIT header will have been already deleted by the MS and the TP-UD would be included in an SMS-DELIVER TPDU—an entirely different protocol header. Thus, nothing displayed on Forums could be from the same protocol header as alleged by Petitioners and Houh.

140. Houh’s Figure B further belies Petitioners’ position. As shown below, Houh displays the “Forums message” as the TP-UD within the TPDU. Thus, it is clear that sender name, Forum name, and/or date/time is not part the protocol header of the SMS. Moreover, as explained above, this “additional” information to the message is also user generated or otherwise not integrated for insertion into an application-based information channel as required by the claims.



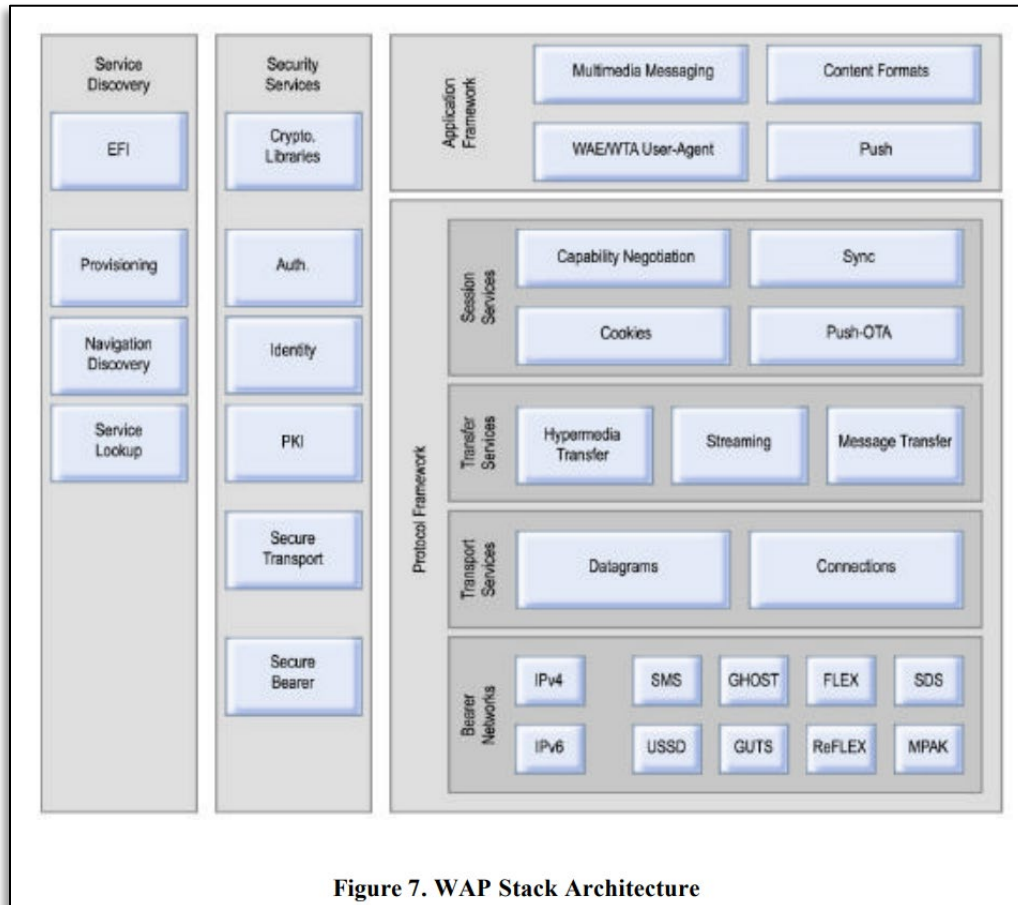
141. When Houh, Figure B is compared to Houh’s annotated Forsyth Figure 7, it is further clear that none of the protocol header data would be included in a Forums message interface. What Houh annotates as “integrated content item” and *information associated with at least one wireless networking functionality of the mobile device*³ in his annotations of Figure 7 is not from the protocol header shown above. It is all part of the TP-UD of the SMS TPDU. Houh plainly fails to show how any wireless network functionality information gets integrated with anything disclosed in Forsyth.

³ Houh relabels the claim language as “information associated with messaging action”.



142. Further, Houh improperly conflates distinct layers within the WAP architecture with one another. Figure 7 from the WAP Architecture (EX.1013), below, shows the stack architecture of WAP. Only the bearer networks are at the level of the networking functionalities of the mobile device with respect to WAP. The GSM-SMS headers exist at that level within WAP. The WDP TPDUs that adapt WAP to operate on SMS operate a layer above in the Transport services layer. Finally, Forums would exist at the “application framework” layer. Thus, what Houh asserts is information integrated with the user content is strictly from the top “application” layer and from the WAP layer associated with wireless networking functionality. This violates what a POSITA would know about network layering

wherein what is part of the application layer would not be considered part of the bearer network layer.



4. Petitioners’ 1[A] and 1[B] Arguments are Contradictory

143. Petitioners rely on Forsyth’s group-based text messaging teaching both limitation 1[A]/9[B]’s “application-based information channel” and limitation 1[B]/9[D]’s “wireless networking functionality of a mobile device.” *See* Petition, 19-21, 38-40.

144. Contrary to Petitioners' argument, a POSITA would have understood Forsyth's reference to "group-based text messaging" to be a capability of Forums, and not a "wireless networking functionality."

145. A group object is "a collection of information that describes or references at least the minimum amount of information about 2 or more entities (usually individual ...) required for activities to be engaged in between them." Forsyth at 2:17-22. In the context of text messaging, "the collection of information" required to create a group object is information about the participant in the group: "In Forums, a new group object can be created when a user defines the recipients of a message." Forsyth at 2:48-49. Forums supports "group-based text messaging" by allowing a user to select "a group of participants", which is stored as an "application independent object", to create a Forum. Forsyth at 5:50-62. Thus, Forsyth's "group-based text messaging" is a capability of Forums. Forums supports a text messaging activity because it is a "messaging tool." Forsyth at 5:27-30. It is group based because "[i]n Forums, a new group object can be created when a user defines the recipients of a message, or (going beyond a simple messaging application) whenever the user defines the desired participants to be involved in group communication." Forsyth at 2:48-53. Contrary to Petitioners' mischaracterization (Petition, 31), Forsyth's reference to "group-based text

messaging” is not a “wireless networking functionality of the mobile device”, it is a capability of Forums, which is an application, as Petitioners argue.

B. Obviousness Based on Ground 2 – Pelkey-Eck

146. Petitioners contend in Ground 2 that the combination of Pelkey and Eck render the Challenged Claims obvious. I disagree for at least the reasons that a POSITA would not have been motivated to combine them as argued by Petitioners and, even if combined, Petitioners’ argument regarding the “previously established application-based information channel into which captured content is to be inserted” fails.

1. Lack of Motivation to Combine Pelkey and Eck

147. Petitioners state, without support, that a “POSITA would have been motivated to combine Eck’s teachings regarding PagerWorld with the network and message server architecture taught in Pelkey.” Petition, 62. I disagree.

148. Petitioners’ motivation to combine the Pelkey and Eck references fails to address fundamental incompatibilities between the two systems. Dr. Houh claims a POSITA would combine the references simply to avoid the cost of Eck’s pager-based system and to gain Pelkey’s internet-based functionality. This rationale collapses under scrutiny because it ignores that the two systems are built on opposing network architectures that a POSITA would not have been motivated to merge.

149. The core technical flaw in Houh's analysis is that he wrongly conflates a system's communication infrastructure with its network architecture. A POSITA would readily understand this critical distinction: infrastructure refers to the physical and logical pathways for data (e.g., the Internet, a pager network, a GSM network), while architecture refers to the rules and logic of how components communicate over that infrastructure (e.g., client-server versus peer-to-peer). *See, e.g.,* EX.1013, 4 (explaining how the WAP *architecture* is meant to operate on a bearer network, i.e. the mobile network *infrastructure*).

150. Furthermore, a POSITA would not have been motivated to combine the references because their communication models are fundamentally incompatible. Pelkey describes a subscription-based, client-server system. Users must register with a central server, which stores and maintains their "buddy lists" and other account information. Communication is akin to a "pull" or subscription model, where clients rely on the server to manage connections and provide status updates. In stark contrast, Eck discloses a push-based, P2P system. Its architecture relies on data being actively "pushed" to client devices, which store their own address books and messages locally on game cartridges. Eck's design does not require constant communication with a central server to operate; it only exchanges data when content is actively transmitted from one peer to another. These are opposing design

philosophies, and the petitioner fails to explain why a POSITA would abandon one for the other, let alone how they could be merged.

151. This architectural clash means the proposed combination is not a "simple substitution" but a complex re-engineering task with no reasonable expectation of success. To force Eck's P2P application logic onto Pelkey's client-server framework, a POSITA would have to discard Eck's decentralized data model and invent a new system for server-side storage and session management. This would fundamentally change the nature of both inventions. Such a radical modification would not have been obvious to a POSITA, and Petitioners provide no evidence or explanation for how it could be accomplished, much less why it would be preferable.

152. This purported motivation also ignores the significant and non-obvious technical challenges a POSITA would have faced. The pager cartridge in Eck operates on a dedicated paging network using protocols, which are fundamentally different from the GSM/WAP or internet-based protocols underlying Pelkey's system. Indeed, neither Eck itself nor Houh describe how the pager cartridge system could be combined with a GSM/WAP-based or internet-based protocol system. A combination would require a complete redesign of the hardware, including the radio frequency (RF) front-end, baseband processor, and antenna systems to support different frequency bands and modulation schemes. It would also necessitate a

complete rewrite of the firmware and communication software stack. This is not a "simple substitution" of one known element for another; it is a complex engineering project to bridge two disparate communication ecosystems, a task for which Petitioners provide no roadmap or motivation.

153. Petitioners' apparent rationale is that a "POSITA would be motivated to apply the network and message server architecture in Pelkey to Eck in order to avoid the charge-based system for exchanging messages and photos via pager cartridge in Eck. (EX-1003, ¶272.)" Petition, 63. I disagree that a POSITA would have been so motivated, including because Eck already addresses the supposed issue of cost in a different way, thus obviating the need Petitioners point to.

154. Eck explicitly teaches the Petitioners claim is missing from Eck—to avoid a charge-based system for exchanging messages. Specifically, Eck describes avoiding cost issues by allowing a user to use "user-generated custom libraries of words, phrases and graphics" to reduce message length. This practice is called "coding," which Eck expressly acknowledges can be used "to reduce message length" and thus "reduce message charges." Eck, 16:59-60; see also id. 16:49-63 ("It can be seen that by using 'coding', the length of the messages may be reduced.").

155. Also, Petitioner's cost-avoidance rationale is internally contradictory and fails on its own terms. Petitioners and Houh paradoxically suggest that the combined system would operate over a GSM-SMS network infrastructure. Ex.1003,

¶¶276-79. At the time of the patent's priority date, GSM-SMS was also a prominent charge-per-message system. This means Petitioners' proposed solution to avoid a charge-based system is to implement another charge-based system—a glaring contradiction that undermines Petitioners' entire stated motivation to combine. Further, Pelkey offers no insight into cutting costs that is not already addressed or rendered irrelevant by the express teachings of Eck itself.

156. For example, neither Petitioners nor Houh address any additional costs of the proposed modification, such as communication and bandwidth costs of the proposed network or the added costs of the network server architecture and other costs of the technical implementation of the GSM-SMS or WAP. These could include increased server-side infrastructure requirements for handling GSM or WAP traffic, licensing and subscription fees associated with GSM/WAP communication services, additional hardware and software integration costs, recurring network usage charges from mobile network operators, and higher maintenance and security expenses to support more complex network protocols.

157. Not surprisingly, neither Petitioners nor Huh point out the specific savings that would motivate the combination or prompt a user to switch to GSM-SMS or WAP, particularly in light of Eck's disclosed "coding" approach for reducing costs, as described above.

158. Petitioners continue that “a POSITA would be motivated to modify the ‘pager cartridge’ in Eck as necessary to use PagerWorld in Pelkey given the disclosed benefits of PagerWorld including ‘exploration and adventure,’ ‘chat and community interaction,’ and ‘character growth.’” Petition, 60 (citing Ex.1003, ¶247; Eck, 10:13-19). I take this to mean that Petitioners are suggesting both a modification to Eck’s “pager cartridge” and a modification of Pelkey. However, neither Petitioners nor Houh ever explain what either modifications would actually be. This is a glaring failure given the nature of changes and fundamentally different architectures of Pelkey (client-server) and Eck (peer-to-peer) discussed above, as well as Petitioners’ admission that “Pelkey does not describe any game play that includes in-game messaging in conjunction with the aforementioned features.” Petition, 61.

159. Petitioners also reiterate Houh’s conclusory opinions that Eck’s PagerWorld game is a known technique, Pelkey’s client-server-based messaging server is a known method/product, and “[r]eplacing the pager system infrastructure system in Eck with the client-server architecture in Pelkey is the simple substitution of one known element for another to achieve a predictable result (internet-based functionality).” Petition, 61 citing Ex.1003, ¶247. But, again, Houh never explains what those modifications would be given differences in operation and architecture discussed above. Indeed, Houh provides no explanation of how a pager cartridge

could be replaced with a hypothetical “GSM-SMS or WAP cartridge” in the system of Eck. This would include making such GSM-SMS/WAP cartridge accept a digital camera cartridge in a piggy-back fashion. Some issues in making the alleged combination would include redesigning the cartridge interface to accommodate differing electrical and communication protocols between pager and GSM/WAP systems, addressing increased power consumption and battery management demands typical of GSM or WAP devices, implementing necessary changes in software drivers and firmware to manage GSM/WAP-specific network registration, messaging protocols, and error-handling routines, and ensuring robust signal integrity and electromagnetic compatibility, particularly given the distinct operational frequency bands and interference concerns of GSM/WAP compared to paging systems.

2. Ground 2 Lacks Disclosure of Limitations of Independent Claims

a) Claims 1, 8, 9, 12, 16, 17, 21, and 22 “application-based information channel”

160. Limitation 1[A]/9[B] recites a “application-based information channel into which the captured content is to be inserted.”

161. In addressing 1[A]/9[B], Petitioners argue that “the captured content (photo/images, sound/auto files) is ‘inserted’ into the ‘application-based information channel.’” Petition, 80-81 quoting 1[A]/9[B]. In support, they point to (i) a user

customizing their person character and (ii) “PagerWorld supports transmission of messages ‘with images and sound bytes to other pagers in the network....’” Petition, 71 citing Eck, 16:42-45, 24:30-36. Neither teaches or suggests the claim limitation.

162. Regarding the customization of the persona character, Eck does not describe what exactly this means or how this would be accomplished. In any event, a POSITA would not view the notion of customizing the persona character with “image data” as the same as inserting a photo/image into a channel, as Petitioners allege. Image data could have included, for example, just an indication of pixel value (e.g., for a person’s hair), such that a persona character could have similar color hair. This does not equate to inserting a photo or image into the alleged channel of PagerWorld.

163. As for Petitioners’ argument that PagerWorld includes transmitting messages with images and sound, there is no such disclosure. Petitioners conflate different embodiments and discussions in Eck; messages with images and sound have nothing to do with PagerWorld.

164. A POSITA reading Eck would have understood Eck to be describing different embodiments or uses of the pager cartridge, some “traditional paging functions” and others in connection with “game play” (Eck, 9:60-61) and PagerWorld. More specifically, the uses of the pager cartridge for sending photos and sounds identified by Petitioners and Houh do not relate to PagerWorld and thus

do not relate to insertion of content in the alleged channel. See, e.g., Eck, 9:25-37 (summarizing the functionality of the “pager-equipped portable game machine,” explicitly enumerating sending messages separately from allowing playing of pager-compatible games like PagerWorld); *id.*, 9:60-61 (“Apart from traditional paging functions, pager cartridge 100 can be used in game playing.”). Indeed, “pager cartridge 100 is a stand-alone accessory device...which can receive messages even when not attached to game machine 10.” Eck, 22:2-5.

165. Eck, 16:42-45, cited by Petitioners, is directed to this traditional pager functionality, never even suggesting the functionality apply to PagerWorld. See Eck, 16:41-17:4.

166. Eck, 24:30-36, also cited by Petitioners, also does not relate to PagerWorld. It is part of a discussion of an “Example Digital Camera,” including its structure and circuitry. See Eck, 23:35-24:65. Telling, the discussion in this section of radio circuitry integrated in the game machine and functionality is without reference to any game cartridge or PagerWorld. A POSITA would have understood that the message-sending functionality is separate from PagerWorld, the alleged application-based information channel. This includes the Message Center described in Eck, including the Compose Message screen 290, which relates only to text. Petitioners and their expert never directly address that the discussions of photos and sounds, on the one hand, and PagerWorld, on the other, are disparate embodiments.

b) Petitioners fail to identify “integrat[ing] the at least one content item and information associated with at least one wireless networking functionality of the mobile device to generate at least one integrated content item” (Limitation 1[B]/9[D])

167. Limitation 1[B]/9[D] recites a “information associated with at least one wireless networking functionality of the mobile device”

168. In addressing 1[A]/9[D], Petitioners argue that an “SMS message includes a header with data fields . . . associated with the action of sending a message over the wireless network, [that] are ‘information associated with at least one wireless networking functionality of the mobile device’”; so, “to send a message, the portable game machine determines this information to construct the GSM-SMS message.” Petition, 77 quoting 1[A]/9[B]. Petitioners further argue, “[s]uch ‘information associated with at least one wireless networking functionality of the mobile device’ is integrated, along with a ‘content item’ to ‘generate at least one integrated content item’ because such functionality facilitates transfer of the content item (message, image, sound) into PagerWorld.” Petition, 78 quoting 1[A]/9[B]. In support, they point to sender information and a persona image being integrated with “message-related information.” Petition, 78.

169. As explained above, GSM-SMS header data does not integrate with the message content enclosed within the TPDU, nor does the header data include “sender information” as Petitioners allege. Further, Neither Petitioners nor Houh

describe any of the GSM-SMS prescribed header fields as being integrable with any content disclosed in Pelkey or Eck. Houh only casually references the fields without ever demonstrating their integration with any content. Ex.1003, ¶278.

170. The inclusion of a persona image in conjunction with a message does not demonstrate content integration either. Again, there is no SMS header field for the inclusion of a persona image. At best, a persona image would only be transmitted as TP-UD with the GSM-SMS TPDU. This would be, like in Randall-Forsyth, a function of the application layer, not the bearer network layer, or even the WDP transport protocol layer (there is no WDP protocol header data available for an image or sender information).

171. Further, using the WAP transmission protocol for data transfer over GSM-SMS does not demonstrate header data integration with image content. For illustration, transmitting a modest 100 kB JPEG via WAP-over-SMS would require ≥ 715 concatenated SMS segments ($100\,000 \text{ bytes} \div 140 \text{ bytes} \approx 714.3$). Each segment carries its own TP-PID, TP-UDL, and optional UDH, adding ~ 9 bytes of overhead per segment, an extra 6.4 kB ($715 \text{ messages} * 9 \text{ bytes} \approx 6.4 \text{ kB}$) of non-content bits that are expressly not retained post-reassembly. This underscores the impracticality and non-integrative nature of WAP headers via GSM-SMS for rich content.

VIII. CONCLUSION

172. I hereby declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct, and that all statements made of my own knowledge are true and that all statements made on information and belief are believed to be true. I understand that willful false statements are punishable by fine or imprisonment or both. *See* 18 U.S.C. Section 1001. I reserve the right to modify my opinions as additional information becomes available to me.

Dated: July 14th, 2025

By: 

Mahdi Eslamimehr, Ph.D.